

CLAIMS

1. A substrate processing apparatus, comprising:

a carrier block (B1) including a carrier placement portion (21) to/from which a
5 substrate carrier (C) storing a plurality of substrates is loaded/unloaded, and first
transfer means (22) for performing delivery of the substrate with respect to the substrate
carrier (C) placed on the carrier placement portion (21);

second transfer means (23) provided adjacent to the carrier block (B1) and for
transferring the substrate along a linear transfer path;

10 a first delivery stage (24) for performing delivery of the substrate between said
first transfer means (22) and said second transfer means (23); and

a plurality of process blocks (B0, B3, B4) arranged along said transfer path and
freely attachable/detachable with respect to a main body of the apparatus;

each process block (B0, B3, B4) including a coating unit (32) for applying a
15 resist solution to the substrate, a developing unit (33) for performing developing
processing on the substrate after exposure to light, a heating unit (PEB, LHP, PAB) for
heating the substrate, third transfer means (31) for transferring the substrate between the
units, and a second delivery stage (TRS1, TRS2) for performing delivery of the
substrate between said second transfer means (23) and said third transfer means (31),

20 and

application of the resist solution to the substrate and/or the developing
processing after exposure to light being performed in units of the respective process
blocks (B0, B3, B4).

25 2. The substrate processing apparatus according to claim 1, wherein an
interface portion (B5) to which a light exposure device (B6) is connected is connected
to a side of said transfer path opposite to a side connected to the carrier block (B1).

3. The substrate processing apparatus according to claim 1, wherein an interface portion (B5) to which a light exposure device (B6) is connected is connected to a side of said transfer path opposite to a side connected to the process blocks (B0, B3, B4).

5

4. A substrate processing apparatus, comprising:

a carrier block (B1) including a carrier placement portion (21) to/from which a substrate carrier (C) storing a plurality of substrates is loaded/unloaded, and first transfer means (22) for performing delivery of the substrate with respect to the substrate carrier (C) placed on the carrier placement portion (21);

10

second transfer means (23) provided adjacent to the carrier block (B1) and for transferring the substrate along a linear transfer path;

a first delivery stage (24) for performing delivery of the substrate between said first transfer means (22) and said second transfer means (23); and

15

a plurality of process blocks (B0, B3, B4) arranged along said transfer path and freely attachable/detachable with respect to a main body of the apparatus;

each process block (B0, B3, B4) including a liquid process unit (U1) performing processing with a chemical solution on the substrate, a heating unit (PEB, LHP, PAB) for heating the substrate, third transfer means (31) for transferring the substrate between the units, and a second delivery stage (TRS1, TRS2) for performing delivery of the substrate between said second transfer means (23) and said third transfer means (31), and

20

a series of processing being performed on the substrate in units of the respective process blocks (B0, B3, B4).

25

5. The substrate processing apparatus according to claim 4, wherein said liquid process unit (U1) is for forming a coating film.

6. The substrate processing apparatus according to claim 4, wherein said liquid process unit (U1) is for applying a chemical solution including precursor of an insulating film to the substrate.

5 7. The substrate processing apparatus according to claim 4, wherein said plurality of process blocks (B0, B3, B4) are formed to have a same size in two dimensions.

10 8. The substrate processing apparatus according to claim 4, wherein said second transfer means (23) is provided in a transfer block extending along arrangement of the plurality of process blocks (B0, B3, B4), and each process block (B0, B3, B4) is configured to be attachable/detachable with respect to the transfer block.

15 9. The substrate processing apparatus according to claim 8, wherein said carrier block (B1) is capable of rotating about a rotation shaft (28) provided at an end portion of said transfer block (B2).

20 10. The substrate processing apparatus according to claim 8, wherein said process block (B0, B3, B4) is attached to said transfer block (B2) via a hinge (528), and rotated about said hinge (528) to be positioned in place.

25 11. The substrate processing apparatus according to claim 4, comprising a positioning member (45) provided at a bottom portion or a side portion of a region where said process block (B0, B3, B4) is to be arranged, for use in positioning said process block (B0, B3, B4).

12. The substrate processing apparatus according to claim 4, comprising a guide member (44) provided at a bottom portion or a side portion of a region where said

process block (B0, B3, B4) is to be arranged, for use in drawing the process block (B0, B3, B4), and a positioning member (45) provided for positioning the process block (B0, B3, B4) to the guide member (44).

5 13. The substrate processing apparatus according to claim 4, wherein each process block (B0, B3, B4) includes a plurality of utility lines (41, 42) for taking in utilities from the outside, and connection ends (41a, 42a) of the respective utility lines (41, 42) configured to be attachable/detachable with respect to connection ends (41b, 42b) of corresponding utility lines on the outside.

10 14. The substrate processing apparatus according to claim 13, wherein said plurality of utility lines (41, 42) supply utilities different from each other, and each of the plurality of utility lines (41, 42) is branched on a downstream side to be guided to the respective process units.

15 15. The substrate processing apparatus according to claim 13, wherein the plurality of utility lines (41, 42) include a supply line of liquid for temperature regulation, a supply line of inactive gas, an electric supply line, and a signal line.

20 16. The substrate processing apparatus according to claim 4, wherein a connection end (41b, 42b) on an external side is provided at a lower side of the second transfer means (23), and it is configured such that when the process block (B0, B3, B4) is pressed to the second transfer means (23) side, the connection end (41b, 42b) on the external side is connected to a connection end (41a, 42a) on the process block (B0, B3, B4) side.

25 17. The substrate processing apparatus according to claim 16, wherein the utility lines (41, 42) further include a chemical solution supply tube.